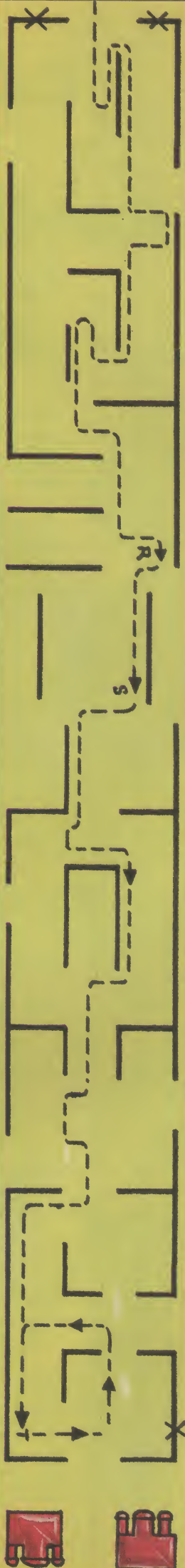


## LEVEL FIVE

No map, I'm afraid, as the scenery has no distinguishing landmarks. However, it must be noted that this is the only level where you can collide with the scenery without dying. Beam up as often as possible — as soon as you've left off a full beam, beam up again. Don't shoot the snakes unless you can hit the heads. Try to stay on the 'inside' of the snakes, as the pieces fly outwards when they die. Shoot the snakes' heads when they're at the bottom of the screen as the pieces don't fly around the screen when it dies. Try to get a highly damaging full beam shot in as the alien at the end of the level appears. When it starts following you around the screen, shoot hits off the top and bottom to give you more time. Only use full beam shots.



## LEVEL SIX

This is where the going gets even tougher. There's a fairly straightforward route through to the end, so follow it. You have to learn the movement patterns of the aliens

the hard way... Shoot the lower alien (X) first so you have enough time to shoot the weapon-bearing pod creature thing AND the other alien above. Now make your way to...

R Wait here and shoot the aliens as they drop down. Now move to... S... and shoot the next wave of aliens as they drop down (you can just about touch the platform — which

helps, as it means you don't get hit by the bullets they release). Follow the route through to the end sequence and sit at... T Oh yes, shoot the alien (X) at the top

of the screen for a sitting target. Fight with the force on your side! shoot the aliens as they move down the screen. Ah, but you can't kill the aliens unless you shoot their

avoid the first alien that comes down facing left, so it speak. Go that No? Right. This little devil is facing right. Shoot it. This little devil is facing left. Yikes! Get out of its way, via the route indicated



## LEVEL SEVEN

Oh dear, this is another nasty level. Keep plenty of ten pees handy, 'cause we're going in for the kill... Watch out for the exploding scenery (some of which is indicated on 'map with an 'X'). Bravely battle your way through to...

of aliens attack. Kill 'em. When the red aliens appear on the far right, move it! Now watch the whole game slow down something rotten. But watch out! When the alien count decreases, everything speeds up again very quickly. Make your way to the end sequence — the alien scrap yard. Watch out for the falling debris.

W Stay as close as possible to the alien's glowing orb (fnorrr! Fnorrr!) and when it appears shoot it. Make sure you shoot the sh... shnola out of the orb each time the alien appears, 'cause if he isn't dead on his third appearance — panic!

## LEVEL EIGHT

Ere we go... the last level. Arguably easier than the previous two levels — but not much. There's no map either, as it all looks the same. The key to conquering this level is... keep moving, although it's wiser to stick to the left-hand side of the screen. Collect all the extra weapons you can (unless you're such a cocky sod that you've managed to get this far without losing a life), and when you reach the end sequence, stay in the centre of the screen and shoot the 'craz' When the 'shield' in front of the large alien opens up, let 'im have it in the gob — a full beam and The Force. The Force, should now be firmly lodged in his mouth, and you're probably dead 'cause I forgot to tell you about the beam of death he throws at you once you've shot him. Keep firing and watch out for the babies!

With a little skill, luck, what have you, you should destroy the fat git and complete the level and over the game! Cut to twee ending, rapturous applause, etc. Ah, but the battle has only just begun (it's something entirely clichéd). For R-Type the second time around is a damn sight harder than before, and let me tell you... I can't help you.





# DATA EAST'S ARCADE ALLEY

## A SIX GAME ACTION PACKED COMPILATION FEATURING

**KUNG FU MASTER** Battle the deadly guardians and demons armed with nothing more than your own martial arts skills. **EXPRESS RAIDER** Hold ups, robberies and roof top fights ... a wild west classic. **BREAKTHRU** from 400 miles behind enemy lines, recover PK430. A revolutionary fighter in a revolutionary game. **TAG TEAM WRESTLING** Body slams, drop kicks, backbreakers and flying head butts – stamina and teamwork are the keys to championship success. **LAST MISSION** Armed with the most sophisticated weapons systems and guarded by a protective forcefield, return to your invaded galaxy to face the most startling of death defying odds. **KARATE CHAMP** Can you master the kicks, spins, reverse punches and blocks needed to retain your title?

**SO MUCH EXCITEMENT YOU  
WON'T KNOW WHICH WAY TO TURN!**

CBM 64/128 ONLY **£9.99** Cassette **£14.99** Disk





# ARCADES



▲ A Ninja warrior gets the jump on Joe.

## SEGA (2 × 10p)

On first appearances, Sega's latest upright, *Shinobi*, bears a striking resemblance to Atari's *Rolling Thunder*, that popular, but to these eyes rather dreary, horizontally-scrolling secret agent shoot 'em up. You remember — your cool clean on-screen hero wanders along a two-floor landscape, jumping up onto balconies and back down onto floors while zapping a collection of mysterious nasties, most of whom look like psychotic bee-keepers in their bizarre hood/helmet things.

In *Shinobi* you're a lone Ninjutsu master by name of Joe Musashi, with a mission to rescue kidnapped Ninja children (these unfortunates are dotted about the playing area, bound and clad in distinctive pink polyester jump-suits) and destroy their terrorist kidnappers. Initially, the action takes place on two floors, ground and terrace. You've got three controls: a fire button which makes you throw shurikens, fire machine pistols or kick and punch, depending on what level you're on, what weapons you've acquired and how far away the person you're attempting to dis is; a jump button, which enables you to leap up and down, essential both for movement and for avoiding missiles; and finally a smart-bomb "Ninja Magic" button — you only get one per life, but when you press it Joe folds his arms, shrieks something which sounds like "Shuriakin" and alter ego sprites dart all over the screen, killing all the



▲ Eyes off Marilyn — there's a hostage to be rescued.

## SHINOBI

"ordinary" fighters in sight.

The "ordinary" fighters include dagger-wielders, gunmen, difficult-to-zap sword-throwers, spiderman types who jump off walls at you, helicopter-borne commandos and some particularly nasty now-you-see-'em-now-you-don't creatures.

But, tough though these baddies may be, they're positively cuddly compared to the Boss, an enormous Chinese warlord character. This charmer is about three times the size of everyone else in the game, yourself included, and fights by sending fireballs flying about the screen at you. He is first encountered at the end of each stage, when you've rescued your quota of hostages: he peeps his head around the edge of the screen and drops one of his hero-seeking fireballs before disappearing. You'll need to be reasonably nimble to avoid this and follow the "Go" sign on to the next stage.

But it's at the end of the level (there are several stages in each level) that you have the real showdown. It's just you and the Boss in one small room. He's got to be hit five times in the face, and no, your Ninja magic won't get rid of him, it'll just count as one on-target blow. Meanwhile,

he's throwing his flaming missiles at you like there's no tomorrow. And if one makes contact, there isn't. It's no joke trying to jump up and fire accurately at face level (the Boss is too tall for you to hit in the head with your feet planted on the ground, natch) while evading the balls of fire snaking around this boudoir of death after you. But until he's dead, you can't go on.

When you eventually manage to defeat the big guy, there's a special bonus phase to compete in, and very nice it is too. The action becomes a kind of vertical shoot 'em up. You're represented by a pair of arms in the foreground, with a shuriken held in your right hand. Before you are two platforms, interspersed by chasms. Ninja warriors stream out along the furthestmost platform from both sides of the

screen, and you're got to try to hit them with the shurikens. But you'd better be quick about it: if not destroyed the Ninjas leap nimbly onto the nearer platform, and if one manages to make a second jump and reaches you, in true *Space Invaders* fashion, you're dead.

As the game progresses, the scenery changes and becomes far more intricate. There are heights to be scaled, wire fences to be leapt over and stairs to climb, all cluttered with increasingly tough enemies. And, as you've got to rescue all the hostages from a given stage before you can move on, each



▲ A swordfighter waits on the other side of the fence.

obstacle has to be confronted and overcome.

There are some nice graphic touches about, notably the blocks of Marilyn Monroe posters to be found on derelict walls, and the soundtrack is pleasant.

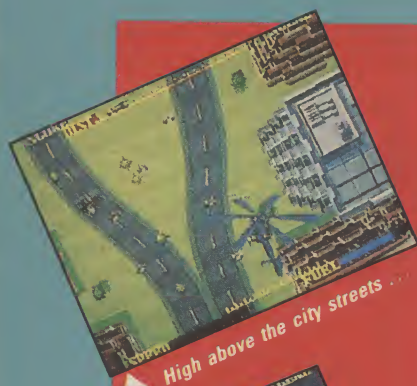
And, with five missions to complete, this one will keep you, and your money, occupied for quite some time. *Shinobi* doesn't break much new ground but nevertheless bears the hallmarks of a coin-up wow. It's tough, but not so tough that you lose interest. It combines several different kinds of shoot'em and beat'em up action in one well-thought-out, well-executed game. It looks good, it plays brilliantly and it's coming to an arcade near you soon.

**Nick Kelly.**

GRAPHICS:	8
SOUND:	7
TOUGHNESS:	7
ENDURANCE:	8
VALUE:	8
OVERALL:	8



# ARCA



High above the city streets ...



... and down amongst the trees ...



... above the nasty warship ...



... hovering with ease (ouch! — Ed).

**SEGA**  
(5 × 10p)

Well, nobody could accuse Sega of resting on their laurels. With *Afterburner* barely off the launch pad, and *Heavyweight Champ* just limbering up, the boffins could

have been forgiven for taking a few weeks well-earned before embarking on yet another quest to push back the boundaries of state-of-the-art.

But no, not content with their monopolisation of the dedicated console market, Sega have just produced yet another exceptional coin-op. Is it a car? Is it a plane? No, it's a helicopter, and a pretty groovy one at that.

*Thunder Blade* puts you in the pilot seat of a fairly nifty fighter chopper. The controls handle just like the real thing, with a central joystick to govern height and left/right movement. Your two weapons' respective fire buttons are also housed in the

stick's handle — a cannon and an air-to-ground missile cluster. Finally to your left there's a gear stick which allows you to choose between slow and fast speed flight. Slow effectively allows you to hover.

The seat is suspended by some slick hydraulics which cause you to shift about in response to joystick movement in much the same way as you might in the real thing. However, unless you are very gung-ho and put in years of training and manage to get invited to participate in a very violent war, you're very unlikely to be able to judge the realism or otherwise of the

missions that *Thunder Blade* asks you to fly. You start out with a thirty second practice session during which the ground is seen from above. You've got to plaster all the emplacements, tanks and helicopters below before they can do it to you — and of course, you've also got to avoid crashing into the sides of the canyon which you're flying through.

Once this short phase is completed, the game proper begins. The screen view tilts from view-from-above to full frontal and you find yourself flying, *Afterburner*-style, through an airspace chock full of fighters, helicopters and



Tanks behind the towerblocks.

## THUNDER BLADE

# ARCA



# ADES



Lifting off the launch pad.



Cremated by the cavern.

missiles. The landscape begins as a high-rise building area, and you've got to guide your chopper in between the scrapers. The streets are overrun by tanks and armoured vehicles which also empty their magazines at you.

Being a helicopter, you can fly high above the ground or bring yourself right down to street level. You can hover — though if you do so for more than a few seconds, you're

liable to be crept upon by a hostile aircraft and strafed — and you can even touch down on the tarmac.

The action is incredibly fast, though it's fair to say that one does feel a wee bit more in control than in *Afterburner*. You can fly over the tops of the 'scrapers, and hope that an enemy doesn't decide to pop up unexpectedly in your path, or you can take the lower-level route, cruising a

few yards above the ground, taking out all the ironclads and avoiding the office buildings and trees that line the boulevards.

If you manage to negotiate this level, the screen briefly reverts to a verticle, as you take on an aircraft carrier bristling with anti-aircraft batteries.

The next level finds you cruising along, full-frontal mode once more, above the open fields. There are fighters here to take out, too, but with a bit of luck you should be able to reach the cavern entrance. Now your skills as a pilot are really in for a testing — you've got to bring your whirlybird through the stone portals and negotiate your way through a hair-raising subterranean obstacle course of stalagmites and stalactites, blasting away at lurking enemy craft all the while.

While you're attempting to make your way through these perilous locations the stereo speakers housed in your seat's headrest pump out music and excellent sound effects and, with the cockpit

gently — and occasionally violently — swaying in response to your steering, you can almost smell the smoke of battle.

Sega can certainly pat themselves on the back — again. *Thunder Blade* really does bring the dedicated coin-op one more step up the ladder of brilliance. And what makes this game really special is that, while the action is fast and furious, it's not quite fast enough to turn it into a lucky dip shoot-'em-up (as some people have found *Afterburner* to be):

*Thunder Blade* is a toughie, make no mistake about it, but it's also a game where the better you get at handling the exceptionally realistic controls, the longer you can expect to live. If you're into sheer bone-shaking action-packed blasta-billy, you'll not be disappointed, but there's more to *Thunder Blade* than just thrills 'n' spills.

You may come for the action, but you'll stay for the challenge.

**Nick Kelly.**



# ADES

GRAPHICS:	9
SOUND:	9
TOUGHNESS:	8
ENDURANCE:	9
VALUE:	8
OVERALL:	9



It's here - The return of Elvin Atombender!

# IMPOSSIBLE MISSION II™

Unsurpassed Espionage Action...

After two year's wait at last it's arrived—the sequel to beat all sequels! Impossible Mission II retains all the fun and strategy of the original as once again you embark on the challenge to find a safe route to Elvin and the final showdown where he will meet his end! Search each room, find code numbers, objects and keys to help you with your mission. You must avoid or destroy the guards and robots that patrol the five towers or risk being destroyed yourself.

Successfully dispose of Elvin and your quest is half over! Now your Mission becomes truly Impossible as you strive to escape the towers, avoiding guards, robots, mines, trap doors and elevators without detection!



...From the lift you enter the first room...



...But where to next?...



...Who or what is lurking behind these cars?...



...Can you access the next tower?...



...Could the final P.I.N. number be here?...



...Running into more trouble?...



...Why is the robot guarding that table?...



...A message on the tape recorder?...



...Quick! Escape from Elvin!...

Commodore 64/128	£14.99 disk	£9.99 cassette
Amstrad	£14.99 disk	£9.99 cassette
Spectrum 48/128K		£8.99 cassette
Atari ST	£19.99 disk	COMING SOON!
IBM PC & Compatibles	£24.99 disk	COMING SOON!

Impossible Mission is a Registered Trade Mark of EPYX Inc. EPYX is a Registered Trade Mark No. 1195270. ©1988 EPYX Inc. All rights reserved. Manufactured and distributed under licence from Epyx Inc. by U.S. Gold Limited, 2/3 Holford Way, Holford, Birmingham B6 7AX. Screens from Atari ST and Commodore 64 versions.



# EPYX®



# ARCADES

## PREVIEW



Guerrilla hijacks government tank.



A wander through Main Street, Nicaragua?

Contras set out to "restore" democracy.



## Freedom fighting in arcades

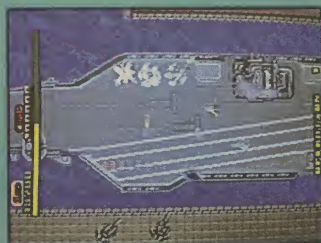
Somebody had to do it sooner or later, we suppose. Yes, those stalwart defenders of democracy Konami have just produced a coin-op which revels in the name of *Super Contra*. For one or two players, this is basically a fairly faithful update of their popular (and recently converted for the 64) hit, *Gryzor*. But instead of taking on nameless extra-terrestrials, *Super Contra* pits you against the Red menace, though, perhaps understandably, Konami have chosen not to actually name the country through which you and your sidekick roam, zapping Commies and blasting pinkos. Nevertheless, its handle leaves little room for doubt

that the ungrateful wretches whom you're pledged to eliminate are some class of Sandinasties. "What is this place?" asks one of our intrepid onscreen heroes in the opening sequence. Why, it's a free country, buddy — surely you've seen one of those before.

But never fear, you reds, pinkos and members of the National Union of Journalists. This ideologically suspect shoot 'em up has a recently released rival. Long live "the heros (sic) of the revolution", proclaims SNK's *Guerrilla Wars*, and while we're not too convinced about our comrades' spelling ability, we're sure their hearts are in the right places. Once again, we're not talking about a stunning new game concept here — *GW* bears a more than passing resemblance to its predecessors *Ikari Warriors* and *Victory Road*. You and

your buddy blast your way past hordes of government troops, commanded by an evil colonel who can occasionally be spotted dancing about behind the lines, goading his

men on and giving our two revolutionary friends very rude single finger signs. Well, you can stick it up your junta, mate, the workers are revolting. Or something.



Blast that carrier.

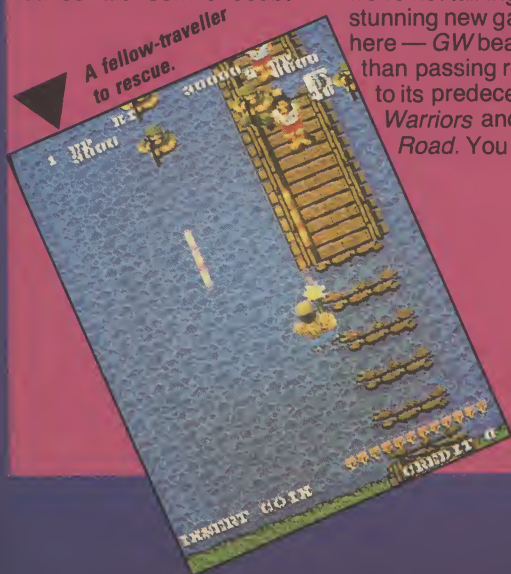


Sound that boom.

## Sonic Sega

Another newbie here from Sega has just caught our eyes. *Sonic Boom* owes much to the by now classic 1942 tradition, with your rather small, but sleek, jet encountering waves of enemy fighters, ground based ack-ack guns and tanks as you fly over the cityscape. There are extra companion fighters to be acquired (these increase your firepower) by shooting out a whole squadron of planes, and harmless munitions trains to blow up for bonus points. At

the end of the level there's an enormous aircraft carrier to be taken out, which is no mean feat. You do have three smart bombs, which increase in destructiveness in proportion to the number of companion fighters you manage to have trailing along with you, and it's worth holding on to all three until you're faced with a big boy. *Sonic Boom* isn't likely to win many prizes for innovation, but it's a nice variation on an enduringly popular theme.



A fellow-traveller to rescue.





IT'S YOU  
WE ANSWER  
TO

Martin  
McKinney



## RAMPAGE COMP

If you wanted a chance to win a towering great Rampage coin-op you had to impress us with your sense of humour, good taste and drawing skills by depicting a monster of some kind destroying a building you hate. Hundreds of you sent us rampaging Maggie Thatchers, whilst there was even a piggin' great Robert Maxwell chewing up chunks of London. However it was between M. Whaite's hulking great Eugene O'Lacey ripping up Zzap Towers and Martin McKinney's Telecom tower horror for the mega prize. We couldn't help ourselves so Michael Whaite of Ecclestone in Lancs come on down! A Rampage machine is all yours!

## UNFORGETTABLE WINNERS

Well, about thirty-three trillion of you knew that U2 wailer Bono's real name is Paul Hewson, but only one of you — Clare Dendy of Basingstoke — gets to keep Eamon Dunphy's official U2 biography, 'The Unforgettable Fire'. Condolances, and a consolation copy of *Bonecruncher* to Patrick Cooper (Alton), Padraig Clarke (South Harrow), G.E. Thompson (Ruislip Manor), David Lindstrom (Sweden) and Tim Bradshaw (Ealing).



# GREATEST CHRISTMAS GIVEAWAY EVER

In an extraordinary fit of festive generosity we assembled trillions of prizes under a Chrimbo tree and gave you all the chance to win one by giving us your New Year's resolution. Here's a huge list of the winners. We had thousands of entries so not everybody won something but a good proportion of you did.

Nell Carter, King's Lynn, Norfolk; (Excelsior Disk drive). Alan Hart, Blackhorse Rd, Walthamstow; (Thundercats vid). Steve Russell, Bideport, Dorset; (Thundercats vid). Richard Lund, Westgate, Morecombe; (Thundercats vid). W

Moore, Redcar, Cleveland; (Thundercats vid). Gary Rice, Tiptree, Essex; (Thundercats vid). Alex Newman, London N6; (Thundercats vid). D Cunningham, Eastbourne, East Sussex; (Thundercats vid). David Hopkins, Northolt, Middx; (Thundercats vid). J Walker, Dovercourt, Harwich, Essex; (Thundercats vid). A Smith, Aughton Lincs; (Thundercats vid). T Lewis, Homdean, Hants; (Gary Lineker board game). S Allen, Wroughton, Wilts; (Gary Lineker board game). A Leung, Coombe Lane West, Kingston Upon Thames; (Gary Lineker board game). M Rennie, Aithy, Forres, Morayshire; (Gary Lineker board game). M Saunders, Akeley, Nr Buckingham;

(Gary Lineker board game). R Jones, Penclandd, Swansea; (Gary Lineker board game). Julio Rlesco, Pensby, Wirral, Merseyside; (Gary Lineker board game). J V Fletcher, Harrogate, N Yorkshire; (Model Ferrari). William Salt, Riddings Estate, Scunthorpe; (Model Steath). Bruce Humby, Wimborne, Dorset; (J Dredd RPG) Stuart Houlton, Luton, Bedfordshire; (Sword of Omens). Neil Parker, Yarm, Cleveland; (RuneQuest Ninja). Richard Cooke, Oakhanger, Cheshire; (Airfix & Poster). Faisal Hamid, Perth, Scotland; (Airfix & Poster). Robert Colston, Exeter, Devon; (Airfix & Poster). Paul Ashmore, Woodhouse, Sheffield; (Airfix & Poster). G Scholes, Deeside, Clwyd; (Cap & Poster). Michael Sharpe, Peterborough, Cambridgeshire; (Cap & Poster). Mark Watkins, Amersham, Bucks; (Cap & Poster). Michael Hinc, Mid-Glam, South Wales; (Cap & Poster). Lucy Aves, Cambridge; (Cap & Poster). Michael Worsly, Haydock, Merseyside; (Airfix & Poster). William Pratt, Exmouth, Devon; (Airfix & Poster). Daniel Coffey, Erdington, Birmingham; (Airfix & Poster). B Spencer, Colwick, Nottingham; (Airfix & Poster). Terry Richard, Oakwood, West Yorkshire; (Airfix & Poster). Andrea Morris, Tyldesley, Manchester; (Airfix & Poster). Steven Morris, Horsham, West Sussex; (Cap & Poster). Neal Hudson, Sutton Coldfield, West Midlands; (Cap & Poster). Stewart Brown, Edinburgh; (Cap & Poster). Shane Clarke, Spixworth, Norfolk; (Cap & Poster). Paul McHale, Arie, Cheltenham, Glos; (Cap & Poster). Brett Patterson, Sheffield; (Cap & Poster). Hadly, Shopshire; (Cap & Poster). Craig Bainbridge, Stockton-on-Tees, Cleveland; (Cap & Poster). Richard Gray, Lessingham, Norfolk; (Cap & Poster). Niaz Sawadzadeh, Twickenham, Middlesex; (Cap & Poster). Robert Dent, Bethel, St Austell, Cornwall; (Cap & Poster). Maureen Witek, Brighton, Sussex; (Mask Rhino). P Beddows, Shrewsbury, Shropshire; (Cap & Poster). Liz Best, Tadley Hants; (Action Force Striker). Darren Jones, Whitchurch, Hants; (Water Machine Gun). Hugh Jackson, Clifford Moor Road, Boston Spa, Wetherby; (Activision Mug & Poster). Stuart Murphy, Great Baddow, Essex; (Activision Mug &

Poster). Simon Orchard, Norton-Sub-Hamilton, Somerset; (Activision Mug & Poster). Mr B Mooney, Washington Tyne & Wear; (Activision Mug & Poster). Anthony Croasdale, Mellor, Lancs; (Activision Mug & Poster). Adrian Hemsly, Portslade, Sussex; (Activision Mug & Poster). Hamish McKechme-Sharma, Hounslow, Middlesex; (Activision Mug & Poster). Darren Cahill, Borehamwood, Hertfordshire; (Activision Mug & Poster). David Proctor, Oswaldtwistle, Lancs; (Activision Mug & Poster). Julian Thomas Hailsham, East Sussex; (Activision Mug & Poster). Richard Earle, Darlington, Co. Durham; (Activision Mug & Poster). D Mitchell Northfleet, Gravesend, Kent; (Activision Mug & Poster). Mark Rodgers, Tingley, Wakefield; (Activision Mug & Poster). Peter Stanforth, Luton, Beds; (Activision Mug & Poster). R Hanlon Shard End, Birmingham; (Activision Mug & Poster). Derren Young, Ferryhill, Co. Durham; (Activision Mug & Poster). Jon Hathaway, North Allerton, North Yorkshire; (Activision Mug & Poster). Alex Newman, London; (Activision Mug & Poster). Mr S J Ayres, Stanmore, Middlesex; (Activision Mug & Poster). Simon Preston, Nr Chorley, Lancashire; (Activision Mug & Poster). David Papworth, Aspley, Nottingham; (Activision Mug & Poster). Paul Baker, Haywards Heath, Sussex; (Activision Mug & Poster). Mr N Goddard, St Leonards-On-Sea, East Sussex; (Druid II). David Bemes, Cookstown, Co. Tyrone; (Druid II). Andrew Wraith Blackpool, Lancs; (Druid II). Martin Foulkes, Temperley, Cheshire; (Bubble Bobble). Stephen Butler, Temel, Holland; (Bubble Bobble). Jason Wharton, Skelmersdale, Lancs; (Bubble Bobble). W L Ponsford, Biffeme, Southampton; (Revs). Mr Robert Barry, New Tredegar, Gwent; (Revs). Richard Barnes, Guildford, Surrey; (Revs). Jonathan Jones, Ammanford, S Wales; (Tracker). Mr C T Wong, Bleichly, Milton Keynes; (Advanced Art Studio). Mark Sontall, Shirley, Surrey; (Knight Orc). Kolin Robertson, Fleet Hargate, Lincs; (Guild of Thieves). Graham Edwards, Knowle, W Mids; (Pawn). Peter Beach, Solihull, West Midlands; (Warhawk). Mr S Hayward, Southbourne, Dorset; (Warhawk). Andrew Loizos, Thornton Heath, Surrey; (Warhawk). Abid Hussain, Longsight, Manchester; (Warhawk). Neil Daalway, Whittinton, Staffs; (Thrust). Jamie Cosse, Warsash, Hants; (Thrust). J Best, Battersea, London; (Thrust). J Blues, Bradford, West Yorks; (Thrust).



## RAINBIRD COMP

We offered you the chance of winning a complete set of Rainbird adventures and a whizz clank disk drive to boot them on. All you had to do was put yourself in the position of the CU crew. Not easy. We were thirsty and because we're so badly paid and it was the end of the month we had no money to quaff ale with in the hostelry next door. The answer we wanted to hear from the options we gave you was to approach the fat ad manager of ad fat C&VG and borrow a five spot (although it has to be said the new editor is nearly as fat and just as rich). When we make it into the pub we find it's packed. We're just about to head upstairs when Mike spots the fruitie has nine nudges. The solution here is clear. MP cannot walk past a fruit machine without checking whether it is ready to cough up. Therefore they play.

Most of you guessed right. Are we that predictable? But first out the bag was Wayne Burton of Grimethorpe, Barnsley. Well done, my son, adventuring you shall go.



# TOTAL BACKUP POWER Now ACTION REPLAY

NOW EVEN MORE POWERFUL, MORE FRIENDLY AND WILL BACKUP

ONLY  
**£29.99**  
POST FREE

Action Replay works by taking a 'SNAPSHOT' of the program in memory so it doesn't matter how the program was loaded – from tape or disk – at normal or turbo speed.

● **WARP 25. THE WORLD'S FASTEST SERIAL DISK TURBO – NOW EVEN FASTER! LOADS 200 BLOCKS IN 6 SECONDS! 240 BLOCKS IN 7 SECONDS!** – that's even faster than some parallel systems. Built into the cartridge – no extra hardware or software required. Includes supercast, warpsave, scratch, filecopy/convert. Integrated with normal disk turbo for supercompatibility – auto detects warp or normal format so no special load commands are required. Turbo and Warp 25 speed are entirely independent of the cartridge with SUPERBOOT.

● **SIMPLE TO USE:** Just press the button and make a complete backup – tape to disk, tape to tape, disc to tape, disk to disk. THE PROCESS IS AUTOMATIC – JUST GIVE THE BACKUP A NAME.

● **TURBO RELOAD.** All backups will reload at turbo speed, COMPLETELY INDEPENDENTLY OF THE CARTRIDGE.

● **SPRITE KILLER.** Make yourself invincible. Disable sprite collisions – works with many programs.

● **PRINTER DUMP.** Freeze any game and print out the screen. Eg. loading picture, high score screen etc. Works with most printers. MPS 801, 803, Star, Epson etc. Double size, 16 shades, reverse print option. Very versatile – no user knowledge required.

● **PICTURE SAVE.** Save any Hires multicolour screen to disk at the push of a button. Compatible with Blazing Paddles, Koala, Artist 64, Image System etc.

● **SPRITE MONITOR.** Unique Sprite monitors allows you to freeze the action and view all the sprites, watch the sprite animation, save or delete any sprite. Load sprites from one game into another to make customised programs.

● **POKES/CHEAT MODE.** Press the button and enter those pokes for extra lives etc., then restart the program or make a backup. Ideal for custom games.

● **MULTISTAGE TRANSFER.** Even transfers multistage programs from tape to disk. The extra parts fast load – a unique feature. Enhancement disk available for non-standard multi-loaders (see below).

● **SUPER COMPACTOR.** Ultra efficient program compaction techniques. Each program saved as a single file. 3 programs per disk side – 6 programs per disk, if you use both sides.

● **TEXT MODIFY.** Change title screens, high score screens etc. Put your own name into a game then restart it or make a backup to tape or disk. Very simple to use.

● **MONITOR.** Full feature 'Floating' type MACHINE CODE MONITOR. All standard features plus many more:- assemble, disassemble, hex dump, interpret, transfer, compare, fill, hunt, number conversion, bank switching, relocate, load/save etc. Uses no memory. Full printer support.

● **DISK MONITOR.** A special monitor for use on the RAM inside your disk drive. All the usual commands – a useful hacking tool.

● **WHOLE DISK COPY.** Copy a full unprotected disk in under two minutes with only one drive.

● **FAST FILE COPY.** Works with standard and Warp 25 files of up to 249 blocks. Converts formats to and from Warp 25.

● **FAST FORMAT.** Under 20 seconds.

● **TOOLKIT COMMANDS.** A whole range of useful new commands including: AUTO LINE NUMBERING, DELETE, MERGE, APPEND, OLD, LINESAVE, etc., PRINTERLISTER – list any program (including directory) directly from disk to printer or screen without corrupting memory.

● **REDEFINED FUNCTION KEYS.** Single stroke commands for operation of many common commands including: LOAD, SAVE, DIR. Load from directory – no need to type in filename.

● **TAPE TURBO.** Designed to make turbo load/save for your own programs. No screen blanking during loading.

**REMEMBER** all features are built in and available at the touch of a key. All features work with both **TAPE** and **DISK**. (Except multipart transfer & disk file utility).

## ENHANCEMENT DISK

Contains routines for transferring many of the non-standard multi-load games from tape to disk. Over 40 titles. Latest additions are **LAST NINJA**, **ROAD RUNNER** (infinite lives option), **BLOOD 'N' GUTS** (play any event), **DECEPTOR**, **LEADERBOARD EXEC** and **WORLD CLASS**, **KILLED UNTIL DEAD**, **MASK**, **INDIANA JONES**, **IMPLOSION**, **TAIPAN**, plus all the classics including **SUMMER GAMES**, **WORLD GAMES**, **DRAGONS LAIR 1 and 2**, **GAUNTLET**, **SUPERCYCLE** etc. Works in conjunction with **ACTION REPLAY**.

Disk includes **GRAPHIC SLIDESHOW** for displaying pictures saved with **ACTION REPLAY**. Plus Warp 25, Superboot – non Action Replay owners can speed up their 'expert' or 'freeze machine' programs to see what they have been missing.



# R TAKES A QUANTUM LEAP Y MK IV HAS ARRIVED!

FOR  
CBM64/128

LL BACKUP MORE PROGRAMS THAN ANY RIVAL UTILITY.

**BUT THATS NOT ALL ... NOW AVAILABLE FOR THE SERIOUS PROGRAM HACKER  
ACTION REPLAY IV 'PROFESSIONAL'™**

● All the features of the normal Action Replay IV but with an amazing on board LSI LOGIC PROCESSING CHIP. Plus 32K operating system ROM and 8K RAM CHIP. The first RAM/ROM based cartridge of its type!

## ALL THE MK IV FEATURES PLUS ...

### ● FULLY INTEGRATED OPERATION.

The MK IV 'Professional' has all the features of the MK IV plus an onboard custom LSI LOGIC PROCESSING CHIP that integrates the whole range of utilities and makes them available at the press of a button at any time.

### ● EXTENDED MONITOR.

The 'Professional' has an extra powerful machine code monitor. Because it has both ROM and RAM at its disposal the Professional can freeze any program and then examine the WHOLE OF COMPUTER MEMORY in its frozen state including screen RAM, ZERO PAGE and STACK.

Full feature disassembly, compare, fill, transfer, hunt, relocate, jump etc. etc. In fact all the features of the best fully blown monitor available. Return to the frozen program at the press of a key at the point you left it! An absolute must for the program hacker - or even the programmer who needs to de-bug his program.

### ● INTELLIGENT HARDWARE.

The Professional hardware is unmatched anywhere in the world today. The special logic processing chip can cope with protection methods as they appear by reacting to its environment.

**WARP 25**

Reloads an  
average BACK-UP  
in 6 Seconds!!

**MK IV  
PROFESSIONAL**  
ONLY **£34.99**  
POST FREE

## UPGRADE INFORMATION

**MK III TO MK IV.** Just send £9.99 and we will send you the new MK IV Chip to plug into your cartridge. Fitting is very easy.  
**MK III TO MK IV 'PROFESSIONAL'.** Send your old cartridge plus £19.99 and we will send you a new Professional MK IV.

MK 2 Action Replay owners can get £10 as part exchange against either the MK IV or Professional. Send old cartridge plus balance.



## PERFORMANCE PROMISE

Action Replay will backup any program that any other cartridge can backup - and more! It also has an unmatched range of onboard features. Before you buy check our competitors ads to see what they offer and see how many of the Action Replay MK IV features are either not there or have to be loaded from Supergate disks etc. When you buy Action Replay if you don't find our claims to be true then return it within 14 days for a full refund.

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

## HOW TO ORDER ...

### BY PHONE

    
0782 273815  
24 hr Credit Card Line

### BY POST

  
Send cheques/PO's made  
payable to 'Datel Electronics'

### EUROPEAN ORDERS

ADD £1.00 P+P  
**OTHER COUNTRIES**  
ADD £3.00 P+P  
Fax Orders 0782 264510

# DATTEL ELECTRONICS

UNITS 8/9, DEWSBURY ROAD, FENTON INDUSTRIAL ESTATE,  
FENTON, STOKE-ON-TRENT.

**SALES ONLY**  
0782 273815

**TECHNICAL ONLY**  
0782 202258

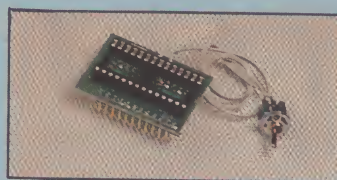


# DATTEL ELECTRONICS

## 256K SUPEROM EXPANDER

- ☐ Now you can select from any of 8 32K EPROMs instantly.
- ☐ 8 sockets to accept upto a 32K EPROM in each.
- ☐ On board operating system — no programs to load.
- ☐ Program your own EPROMs using our EPROM programmer.
- ☐ No need to have loads of cartridges — just make a selection from the Superom menu.
- ☐ Directory of utilities on power up.
- ☐ Fully menu driven on power up.
- ☐ Select any slot under software controls.
- ☐ Unique EPROM generator feature will take your own programs — basic or m/c and turn them into autostart EPROMs. (EPROM burner required).
- ☐ Accepts 2764/27128/27256 EPROMs.
- ☐ On board unstoppable reset.

**ONLY £29.99**



## 4 WAY KERNAL BOARD

- ☐ This board fits in place of the kernal in your 64 and accepts a 16K or 32K replacement kernal giving 2 or 4 different operating systems.
- ☐ Just flick the switch supplied to select between systems.
- ☐ This is a carrier only — ready to accept your own chip.
- ☐ Now you can have all your different systems available at one time.

**ONLY £8.99**

5 WAY BOARD **ONLY £12.99**



## CLONEMASTER™

- ☐ Makes tape to tape backups.
- ☐ Works with even Turbo Loaders etc.
- ☐ Requires access to two CBM type data recorders.
- ☐ Makes perfect copies.
- ☐ Very simple to use.
- ☐ LED level indicator.

**ONLY £9.99 POST FREE**



## RESET CARTRIDGE

- ☐ Unstoppable reset button.
- ☐ Resets even so called "unstoppable" programs.
- ☐ Add pokes from magazines etc.
- ☐ Fits in cartridge port.
- ☐ Simply plug in.

**ONLY £5.99**



## DUPLIKATOR™

- ☐ Copies whole disk in one pass — only one drive required!
- ☐ Makes backup copies in eight seconds!!
- ☐ Duplikator is the fastest, most efficient and easiest to use disk copying system ever conceived.
- ☐ Comes complete with 256K on-board ram and it's own operating system — no software to load.
- ☐ Makes multiple copies from one original.
- ☐ Full disk verification during backup process.
- ☐ Copies standard software as well as errors 21-29 and upto 40 tracks.
- ☐ Full disk error check in eight seconds.
- ☐ Full disk verify against ram in fifteen seconds.
- ☐ A must for clubs, user groups etc. How else can you copy over 250 disks and hour for less than £100.
- ☐ Comes complete with on/off switch and reset button.
- ☐ Fitted in minutes — no soldering usually required.

**ONLY £89.99**

## DISK NOTCHER

- ☐ Quickly and easily double your disk capacity.
- ☐ Use both sides of your disks.
- ☐ Simple to use.
- ☐ Takes seconds.

**ONLY £4.99**

## 16K EPROM BOARD

- ☐ Accepts 2 x 8K EPROMs.
- ☐ Switchable to configure as 2 x 8K or 16K or off.
- ☐ On board unstoppable reset.
- ☐ Full instructions.

**ONLY £8.99**



## DEEP SCAN BURST NIBBLER™

- ☐ The most powerful disk nibbler anywhere, at any price!
- ☐ Burst Nibbler is actually a two part system — a software package and a parallel cable to connect the 1541/1570/1571 to 64/128 (state type).
- ☐ What gives Burst Nibbler its power? Conventional nibblers have to decode the data from the disk before it can transfer it using the serial bus — when non standard data is encountered they are beat. Burst Nibbler transfers data as raw GCR code via the parallel cable without the need to decode it so you get a perfect copy of the original.
- Will nibble upto 41 tracks. ● Copy a whole disk in under 2 minutes. ● Full instructions.
- Regular updates — we always ship the latest. ● Fitted in minutes — no soldering usually required.
- Full or 1/2 tracks. ● No need to buy parallel cable if you have Disk Demon/Dolphin etc.
- Cable has throughbus extension for other add ons.

- ☐ Whether to choose FastHack'em or Burst Nibbler? FastHack'Em is unbeatable value as an "all-rounder" — with nibblers, 1 or 2 drive copy, format, file copy, 1571 copy etc. etc., so if you have a more general requirement perhaps FastHack'Em is for you. Burst Nibbler is a pure nibbler second to none, for the reasons stated. So if it's just making backups you are interested in, there is no other product to beat it.

**ONLY £24.99 COMPLETE**

**SOFTWARE ONLY £12.99 CABLE ONLY £14.99**



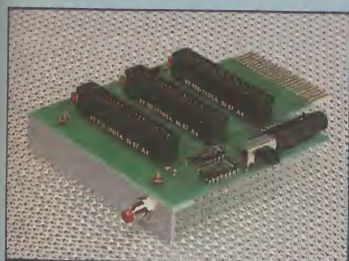
## EPROMMER 64™

- ☐ A top quality, easy-to-use EPROM programmer for the 64/128.
- ☐ Fully menu driven software/hardware package makes programming/reading/verifying/copying EPROMs simplicity itself.
- ☐ Will program 2716, 2732, 2764, 27128 and 27256 chips. 12.5, 21 or 25 volts.
- ☐ Fits into user port for maximum compatibility with cartridges/Superom Board etc.
- ☐ Full feature system — all functions covered including device check/verify.
- ☐ We believe Eprommer 64 is the most comprehensive, most friendly and best value for money programmer available for the 64/128.
- ☐ Ideal companion for Superom Board, Cartridge Development System, our kernal expanders or indeed any EPROM base project.
- ☐ Comes complete with instructions — plus the cartridge handbook.

**ONLY £39.99 COMPLETE**



# DATTEL ELECTRONICS



## 3 SLOT MOTHERBOARD

Save wear and tear on your Expansion Port

- ☐ Accepts 3 cartridges.
- ☐ Onboard safety fuse.
- ☐ Switch in/out any slot.
- ☐ High grade PCB.
- ☐ Fully buffered.
- ☐ Reset button.

**ONLY £16.99**

## DATA RECORDER

- ☐ Quality Commodore compatible data recorder.
- ☐ Pause control.
- ☐ Suitable for 64/128.
- ☐ Counter.
- ☐ Send now for quick delivery.

**ONLY £24.99**



## SMART CART™

Now you can have an 8K or 32K cartridge that you program like RAM then acts like ROM!

- ☐ 8K or 32K pseudo ROM.
- ☐ Battery backed to last up to 5 years (lithium battery).
- ☐ Simply load the program you require - then flick the switch. The cartridge can then be removed just like a ROM cartridge.
- ☐ Make your own cartridges including autostart types - without an EPROM burner.
- ☐ Can be switched on or off board via software.
- ☐ I/O 2 slot open for special programming techniques.
- ☐ 32K version has 4 x 8K pages.
- ☐ Some knowledge of M/C is helpful - but full instruction are provided.

**8K VERSION £14.99**

**32K VERSION £29.99**

## SMARTCART UTILITIES

A series of utility programs for use with Smartcart. Simply load in the program and you have a powerful cartridge. When you have a different requirement - load in another program and you have a new cartridge. The process takes seconds, and can be repeated any number of times.

We intend to release a range of programs. The first available are:

## DISKMATE II

☐ all the features of Diskmate II (see ad).  
loaded in seconds - with full instructions. **ONLY £9.99**



## PRINTER IV

Now you can turn your MPS 801 into 4 printers in one!!

- ☐ Alternative character set ROM - fitted in seconds.
- ☐ All four sets have true descenders.
- ☐ 100% compatible with all software.
- ☐ Descender. ☐ Eclipse.
- ☐ Scribe. ☐ Future.
- ☐ Choose any set at the flick of a switch.

"For anyone who uses their printer often this chip is a must. It's quick and easy to use and the end results are impressive" - Your Commodore, Jan 87.

**ONLY £19.99**



## TURBO ROM II

Turbo Rom II is a replacement for the actual kernal inside your 64. It provides superfast load/save routines.

- ☐ Loads most programs at 5-6 times normal speed.
- ☐ Saves at 5-6 times normal.
- ☐ Improved DOS support including 10 sec format.
- ☐ Programmed function keys:- load, directory, old, etc.
- ☐ Return to normal kernal at flick of a switch.
- ☐ FCOPY - 250 block file copier.
- ☐ FLOAD - special I/O loader.
- ☐ Plus lots more.
- ☐ Fitted in minutes - no soldering usually required. (On some 64's the old ROM may have to be desoldered).

**ONLY £14.99**



## BLAZING PADDLES

A complete lightpen/graphics illustrator package.

- ☐ A fully icon/menu driven graphics package of a calibre which should cost much more.
- ☐ Complete with a fibre optical lightpen system for pin point accuracy.
- ☐ Multi feature software including:
  - Range of brushes ● Airbrush ● Rectangle ● Circle ● Rubberbanding ● Lines ● Freehand
  - Zoom mode ● Printer dump ● Load/save ● Advanced colour mixing - over 200 hues!!
  - Cut and paste allows shapes/windows/pictures to be saved to/from tape/disk.
- ☐ Blazing Paddles will also work with many other input devices including: Joysticks, Mice, Graphics Tablets, Trackball etc.
- ☐ Pictures can be saved from Action Replay and edited with Blazing Paddles.

Complete Blazing Paddles & Lightpen **ONLY £24.99**

Blazing Paddles available separately for **£12.99**



## TOOLKIT IV

The ultimate disk toolkit for the 1540/1541



- ☐ A disk toolkit is an absolute must for the serious disk hacker. Toolkit IV has more features than most for less.
- ☐ DISK DOCTOR V2 - Read and write any track and sector including extra and renumbered tracks. Repair damaged sectors. Look underneath read errors.
- ☐ HEADER/GAP EDITOR - Decodes and displays ALL header information including off bytes and header gap. Rewrite the entire header and header gap. Renumber sectors. Also edit any sector tail gap.
- ☐ DISK LOOK - Sort directory. Recover lost files. Display file start/end addresses. Disassemble any file program directly from the disk to SCREEN or PRINTER including undocumented opcodes. Edit Bam. Much, much more.

☐ FILE COMPACTOR - Can compact machine programs by up to 50%. Saves disk space. Compacted programs run as normal.

☐ FAST DISK COPY - Copy an entire disk in 2 minutes or less using single 1541.

☐ FAST FILE COPY - Selective file copy. Works at up to 6 times normal speed.

☐ FORMATTER - 10 second format an entire disk or format any individual track or half track 0 to 41. Redefine any of 30 parameters to create or recreate unique disk formats.

☐ ERROR EDIT - Quickly find and recreate all read errors including extra and renumbered tracks or sectors and half tracks from 0 to 41. Even recreates data under errors and allows you to redefine any necessary parameters.

**ONLY £9.99**

## RAM DISK

- ☐ Turn your Smart Cart into a 32K RAM/disk.
- ☐ 32K of instant storage area for files/programs.
- ☐ Load/save instantly.
- ☐ Disk type commands: load, save, directory, scratch.
- ☐ Program data retained when computer is switched off!
- ☐ Full command set with instructions.

**ONLY £9.99**



## DIGITAL SOUND SAMPLER

- ☐ The new sampler allows you to record any sound digitally into memory and then replay it with astounding effects.
- ☐ Playback forwards/backwards with echo/reverb/ring modulation etc.
- ☐ Now with full sound editing module to produce outstanding effects.
- ☐ Full 8 bit D to A and ADC conversion.
- ☐ MIDI compatible with suitable interface. (I.e. Datel unit for £29.99, see ad).
- ☐ Live effects menu includes real time display of waveforms.
- ☐ Line in/mic in/line out/feedback controls.
- ☐ Powerful sequencer with editing features.
- ☐ Load/save sample.
- ☐ Up to 8 samples in memory at one time.
- ☐ Tape or disk (please state).
- ☐ Complete software/hardware package **£49.99**

☐ Com-Drum software is available separately at **£9.99** to turn your Sampler II into a Com-Drum system as well as a sampling system.



## COM-DRUM Digital Drum System

- ☐ Now you can turn your computer into a digital drum system. ☐ Hardware/software package.
- ☐ 8 digital drum sounds in memory at one time.
- ☐ Complete with 3 drum kits.
- ☐ Real drum sounds - not synthesised.
- ☐ Create superb drum rhythms with real and step time. ☐ Full editing. ☐ Menu driven.
- ☐ Output to hi-fi or through tv speaker.
- ☐ Load/save facilities. (state tape or disk)

**ONLY £29.99**

## COM-DRUM EDITOR

- ☐ 24 drum sounds supplied on disk to enable you to construct your own drum kit.
- ☐ Re-arrange sounds supplied with a Com-Drum to make new kits.
- ☐ With sound sampler hardware you can record your own kits. ☐ Load/save facilities.

**ONLY £4.99** disk only

## ROBOTEK 64

Robotek 64 is a comprehensive hardware/software package which enables you to connect your 64/128 to the outside world.

- ☐ 4 output channels - each with onboard relay
- ☐ 4 input channels - each fully buffered TTL level sensing.
- ☐ Analogue input with full 8 bit conversion.

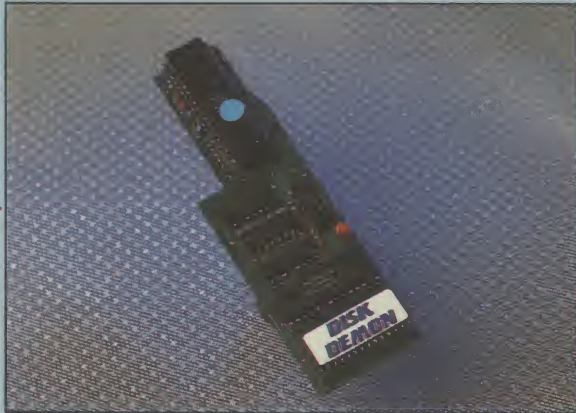
Model & Robot Control made easy

- ☐ Voice input for voice control.
- ☐ Software features:- test mode/analogue measurement/voice activate/digital readout etc.
- ☐ Excellent value! **ONLY £39.99**

including hardware/software/mic etc. (State tape or disk)



# DATTEL ELECTRONICS



## PROFESSIONAL DOS™ MIKROTRONIC £64.99 POST FREE with Disc Demon operating system "The world's fastest parallel operating system"

- ☐ Loads a typical 202 block program file in under 3 seconds!
- ☐ 60x faster load (PRG files).
- ☐ 25x faster load (SEQ files).
- ☐ 20x faster save (PRG files).
- ☐ 20x faster save (SEQ files).

### PLUS AN ADVANCED COMMAND STRUCTURE INCLUDING:

- ☐ Fast format — up to 40 tracks (749 blocks).
- ☐ 16 function keys: list, run, load, directory, format, save, old, verify, etc.
- ☐ Flood will fastload files up to 250 blocks (other similar systems will only cope with 202 blocks).
- ☐ Number conversion. ☐ Reset.
- ☐ Unique built in file copier will copy files up to 250 blocks like lightning — multiple copy options — perfect for copying Action Replay files.
- ☐ Highly compatible with commercial software — can be switched out for non compatible programs.
- ☐ Perfect for use with Action Replay 3 — a typical AR3 backup will reload in about 3 seconds — yes 3 seconds!
- ☐ Speeds up other DOS functions including verify, scratch etc.
- ☐ Comes complete with superfast file and whole disk copier free!
- ☐ Screen on or off during loading.
- ☐ Enhanced command set — over 30 new commands.
- ☐ Easily fitted — Disk Demon plugs inside the 1541 and the new operating system chip plugs inside the C64/128. Fitting takes only minutes and usually requires no soldering.
- ☐ User port throughbus supplied free — you could pay \$15.00 for this alone.
- ☐ Supplied complete — no more to buy.
- ☐ Works on C128/1541 in 64 or 128 mode.

**C128 version  
£69.99**



## BLUE CHIP DRIVE ● Fully C64/128 compatible.

- ☐ At least a top quality drive at a sensible price.
- ☐ Super slimline case
- ☐ External power supply for cool operation.
- ☐ Direct drive motor
- ☐ Supplied complete with all cables — no more to buy.
- ☐ This drive is now probably the most compatible drive available for the Commodore. More so than even Commodore's own 1541C. Much more so than other so called compatibles. In fact we have been unable to find a program including the latest that would not work. (At time of Press).
- ☐ No need to look elsewhere — this is the best.

**ONLY £139.99 POST FREE**  
(If you require courier delivery add \$5.00).

## ULTRA CRUNCHER

● The ultimate cartridge based program compactor.

- ☐ Compacts by upto 30%!
- ☐ More programs for disk.
- ☐ 3 compacting programs on one cartridge.
- ☐ Fast loading/saving routines — works with Disc Demon.
- ☐ Can even further compact AR III files!
- ☐ 250 block file copy function.
- ☐ Full DOS support including fast format.

**ONLY £12.99** on cartridge.  
Available as chip only for **£26K**  
Superom Board for only **£7.99**

## FAST HACK'EM™

● Multi Module Disk Nibbler — all on one disk.

- ☐ Single 1541 Nibbler — Copy a disk in 2 minutes.
- ☐ Auto Nibbler — Copy an entire protected disk in 3 minutes.
- ☐ Super fast File Copy — Under 9 seconds typically.
- ☐ Copes with Fat Tracks.
- ☐ Superfast Copy — Entire disk in 36 seconds with verify.
- ☐ Twin Drive Copier — Even faster!
- ☐ Plus unique "Parameters" mode. These files "Unlock" the more heavily protected programs with a parameter for a particular brand or even single program.
- ☐ No other product is such a good "All Rounder" at this price its unbeatable.

**ONLY £9.99 POST FREE**



## DISKMATE II The Disk Utility Cartridge

- ☐ Disk fastload cartridge.
- ☐ Up to 5 times faster.
- ☐ Fast save. ☐ Fast format (10 secs).
- ☐ Improved DOS — single stroke commands — load/save/dir/old etc.
- ☐ Redefined function keys for fast operation of common commands.
- ☐ Powerful toolkit commands including: old/delete/merge/copy/append/autonum/linesave etc.
- ☐ Plus a full machine code monitor — too many features to list but it has them all!
- ☐ Special switching techniques make Diskmate invisible to the system. Therefore it is a more compatible fastloader than other types.
- ☐ Diskmate II is

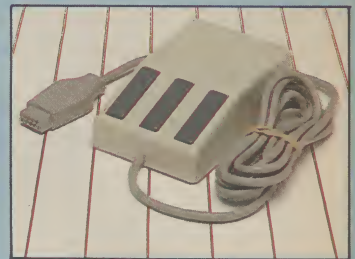
**ONLY £14.99**



## MIDI 64 A Full Midi Interface for the 64/128 at a realistic price

- ☐ MIDI in. ☐ MIDI thru. ☐ 2 x MIDI out.
- ☐ Compatible with most leading software packages including: Seil, JMS, Advanced Music System, Joreth, Steinburg etc.

**ONLY £29.99**



## MOUSE

- ☐ CBM 64/128 mouse.
- ☐ Wide compatibility with software including: Blazing Paddles.
- ☐ Works by mimicking joystick so will work in any joystick application including graphic packages only designed for joystick.
- ☐ Functions on either joystick port.
- ☐ Optical system operation.

**ONLY £24.99**

## CHIPS

- ☐ 27128 **£3.00 EACH**
- ☐ 27256 **£4.50 EACH**



## CARTRIDGE DEVELOPMENT SYSTEM

- ☐ All the necessary parts to produce an 8K/16K auto-start cartridge.
- ☐ Top quality PCB. ☐ Injection moulded case.
- ☐ Reset switch. ☐ 16K EPROM.
- ☐ "Cartridge Handbook" gives full details and tips on building and configuring the cartridge for many uses.

**ONLY £12.99**  
complete with handbook

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

## HOW TO ORDER . . . .

### BY PHONE



0782 273815  
24 hr Credit Card Line

### BY POST



Send cheques/POs made  
payable to 'Datel Electronics'

### BY PRESTEL/FAX

Prestel Pages \* 25880000A

Fax Orders  
0782 264510

# DATTEL ELECTRONICS

UNITS 8/9, DEWSBURY ROAD, FENTON INDUSTRIAL ESTATE,  
FENTON, STOKE-ON-TRENT. TELEX:

**SALES ONLY**  
0782 273815

**TECHNICAL ONLY**  
0782 202258



# NEXT



Confirmed motor racing fans that we all are here at CU Towers, we're all raring to go with the new season soon to be underway. How fortunate then that EA's Ferrari Formula 1 is about to take to the streets at the same time. We celebrate the whole turbocharged thing next issue by printing a thoroughly gear poster of the machine which Michale Alboretto and Gerhard Berger drove to its first Formula 1 victory for four years in the last series. Oh, and we'll have a review of the game, too.

**AND THERE'S MORE . . .**

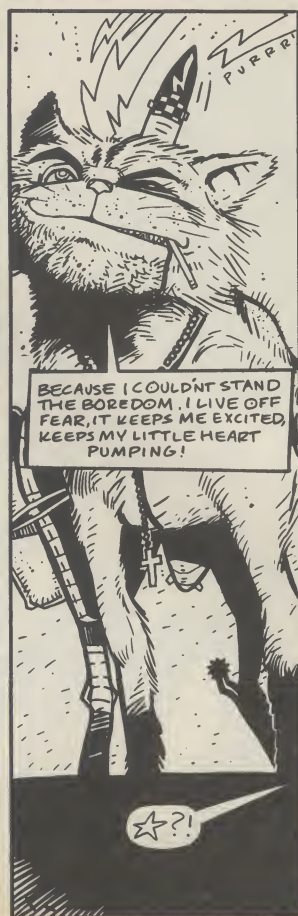
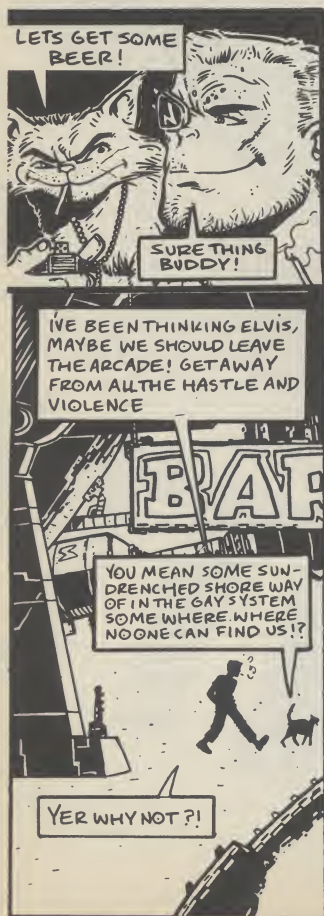
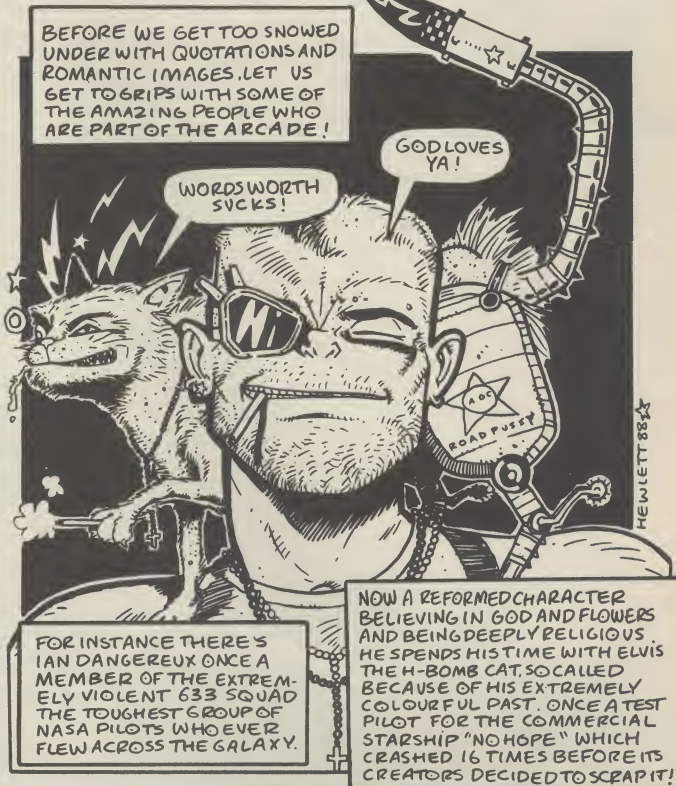
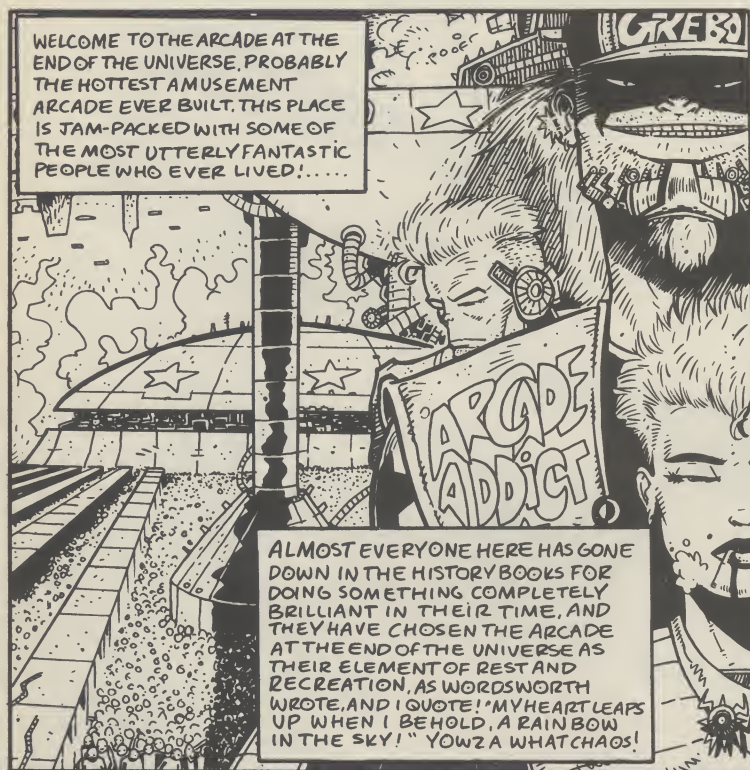
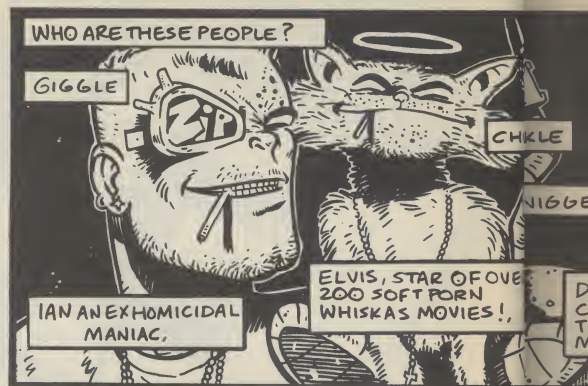
All your favourite bits, reviews of Impossible Mission II and Hotball the first arcade football game for the Amiga plus Arcades, Play To Win, more top pokes, and previews of up-and-coming hot shots (don't mention that name . . . Ed) So, see you March 26th with a pound and a bit in your mitt.



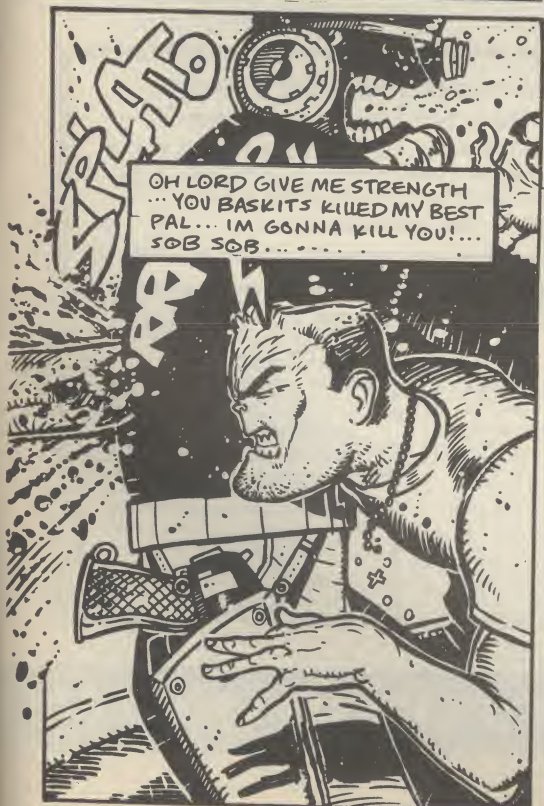
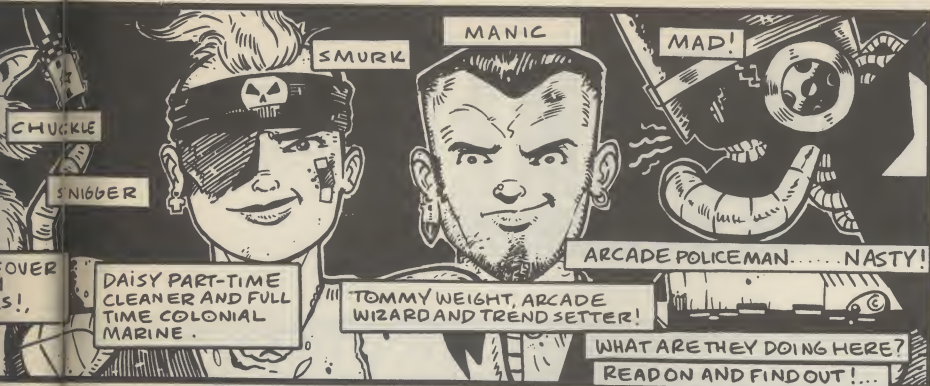
# MONTH



# Groovy Arcade Stories







NEXT UP: DROP-SHIP MANIA! ☆



# SELL-OUT COMMODORE USER SELL-OUT

TO ADVERTISE IN SELL-OUT CALL ANGIE SMART ON 01-251 6222

## FOOTBALL & CRICKET

SPORTS SIMULATIONS FROM E & J SOFTWARE (Established 3 Years)

4 CLASSIC Strategy Games packed with GENUINE & REALISTIC Features.  
**PREMIER II:** CAN YOU HANDLE ALL OF THIS? Play all teams Home & Away. Unique & Comprehensive Transfer Market Feature. Full Team & Substitute Selection ● In-Match Substitutions ● Match Injuries ● Team Morale ● Transfer Demands ● 7 Skill Levels ● Manager's Salary ● Continuing Seasons ● Job Offers ● Sackings ● Save Game + MUCH MORE!  
**EUROPEAN II:** THE MOST COMPLETE EUROPEAN SIMULATION YOU CAN BUY! Home & Away Legs ● Penalty Shoot Out ● 2 Substitutes Allowed ● Away Goals Count Double ● Full Team & Subs Selection ● Extra Time ● 7 Skill Levels ● Disciplinary Table ● Save Game ● TEXT MATCH SIMULATION ● Match Timer, Named & Recorded Goal Scorers, Corners, Free Kicks, Goal Times, Disallowed Goals, Sending Off, Injury Time, Penalties, Bookings + MUCH MORE!  
**WORLD CHAMPIONS:** A COMPLETE WORLD CUP SIMULATION Select Frenemies ● Squad of 25 Players ● Qualifying Rounds ● 2 In-Match Substitutes ● Disciplinary Table ● Select Four Opponents ● Save Game ● 7 Skill Levels ● Extra Time ● Penalty Shoot-Out ● TEXT MATCH SIMULATION including: Bookings, Goal Times, Named & Recorded Goal Scorers, Injury Time, Corners, Free Kicks, Match Clock, Penalties + MUCH MUCH MORE!  
**CRICKET MASTER:** A SUPERB SIMULATION OF ONE DAY CRICKET. Weather Wicket & Outfield Conditions ● Batting & Bowling Tactics Team Selection ● Fast, Spin & Medium Pace Bowlers ● 4 Types of Batsmen ● Select Field Layout ● 3 Skill Levels ● Wides Bites ● No Ball ● Dropped Catches ● Scoreboard ● Batting & Bowling Analysis ● Run Rate ● Run Single Option ● 3 Game Speeds + MUCH MORE! Price includes a FREE pad of CRICKET MASTER Scorecards.

Software availability	Spectrum Any 48 +128	Commodore 64 +128	Amstrad CPC
	Tape Disc +3	Tape 5 1/4" Disc	Tape 3" Disc
PREMIER II	£8.95 £10.95	£7.95 £10.45	£7.95 £11.95
EUROPEAN II	£8.95 £10.95	£7.95 £10.45	n/a n/a
WORLD CHAMPIONS	£8.95 £10.95	£7.95 £10.45	£7.95 £11.95
CRICKET MASTER	£7.95 £11.95	n/a n/a	£8.95 £12.95

GREAT VALUE buy any 2 Games and deduct £2.00 from total ● SUPERB VALUE buy 3 games and deduct £3.00 from total  
 FANTASTIC VALUE buy 4 games and deduct £5 from total. All games available by MAIL ORDER for IMMEDIATE despatch by 1st Class Post. Prices include P&P (add £1.00 outside UK) and include instructions. PLEASE STATE MACHINE AND TAPE or DISC.  
 Send to: E & J SOFTWARE, Room 5, 37 Westmoor Road, ENFIELD, Middlesex EN3 7LE

PART EXCHANGE\* YOUR UNWANTED GAMES AND SAVE 25% ON FULL PRICE GAMES. JUST SEND YOUR GAME IN A STRONG PACKET AND ENCLOSE A POSTAL ORDER OR CHEQUE WITH YOUR ORDER.

One Game per exchange

Send to:

**EXMOUTH MICROS**

13, South Street,  
Exmouth,  
Devon EX8 25X

Telephone: (0395) 267734

\*Applies to games later than 1985

DEPT CU1

## COMPUTER REPAIRS

Fixed Super Low Prices!

Inclusive of parts, labour and VAT



FIRST AID  
FOR  
TECHNOLOGY

1 week turnaround

Collection and delivery service available

### ★ EXCEPTIONAL OFFERS ★

C64	£22 inc. + Free Game
C128	£32 inc.
C16	£18 inc.
VIC20, C+4	£22 inc.
SPECTRUMS	£14 inc. + Free Game
SPECTRUM 128/+2	£16 inc.
C64 P.S.U. FOR SALE	£20 inc.
C2N TAPE DECK	£16.99 inc.
1541 DISK DRIVE	£38 inc.

Please enclose payment with item — 3 month warranty on repair  
 Please enclose advert with repair

**W.T.S. ELECTRONICS**

5-9 Portland Road, Luton Beds LU4 8AT. Tel: 0582 458375. Telex: 265871

CUS1

## AT LAST! COMMODORE SPARES AT DISCOUNT PRICES

CIA	6526	£11.95	ROM	901227-03	£14.99
MPU	6510	£11.99	ROM	901225-01	£9.99
PLA	906114-01	£9.99	SOUND	6581	£14.99
ROM	901226-01	£9.99	RAM	4164	£2.49

C64 POWER SUPPLY UNITS £19.99

All prices include post & packing, handling and VAT — send your faulty computer and P.S.U. for estimate and repair from £9.99 + parts + VAT

SPECTRUM AND AMSTRAD SPARES AVAILABLE

SEND CHEQUE/P.O.

ACCESS/VISA CARDS WELCOME

### ELECTRONIC SERVICES

176 VICTORIA ROAD WEST, CLEVELYS,  
BLACKPOOL FY5 3NE. Tel: (0253) 822708

TRADE ENQUIRIES WELCOME

Send Large S.A.E. for full list

THE MAIL ORDER SOFTWARE SOCIETY

**'THE BEST THING  
SINCE SLICED BREAD'**

'Try Before You Buy'

GAMES FOR

SPECTRUM — MSX — AMSTRAD  
COMMODORE/AMIGA — ATARI ST.

Send your name, address and which computer(s) you have to:

**M.S.S.**

P.O. Box 57,  
Doncaster, South Yorkshire  
DN4 5HZ

## Commodore 128 User With No S/Ware to use?

Scratch S/W Club offers everything you need to use your 128 to its full potential. We have a S/W Database on all 128 S/W, details info on program for C128, newsletters & quarterly journals.

Like to know more?

Write to:- Brampton, Croome Rd, Defford, Worcestershire, WR8 9AR

### COMSOFT SOFTWARE

HEAVEN IS HELL  
for the COMMODORE 64  
The latest brain-busting adventure  
at only £2.99!!!

Send cheque or P/O to:  
**COMSOFT SOFTWARE**  
60 CEMETERY RD, SOUTHPORT, LANCs

### MATRIX HIRE

THE CHEAPEST WAY TO PLAY THEM ALL

Top games titles for Spectrum, Commodore and Amstrad, please state system.

Details from:  
Matrix Leisure Club  
Dept c.u., 271, Stanstead Road,  
Bishops Cleeve, Shropshire,  
Herts CM23 2BT

★★★★★★★★★★★★

★ **MEGA** ★

A GREAT NEW MAGAZINE FOR ALL  
SPECTRUM AND COMMODORE OWNERS

★ For our special information pack send to: ★

★ 8 BEVERLEY WALK, BROMILEY, STOCKPORT, ★  
★ CHESHIRE SK6 3HG ★

★ TEL:— 061-430-8360 ★

★★★★★★★★★★★★

TO ADVERTISE IN SELL-OUT CALL ANGIE SMART ON 01-251 6222



SELL-OUT

# COMMODORE

## USER

SELL-OUT

TO ADVERTISE IN SELL-OUT CALL ANGIE SMART ON 01-251 6222

### PROBLEMS WITH YOUR COMMODORE?

FOR FAST, RELIABLE AND PROFESSIONAL  
REPAIRS AT COMPETITIVE PRICES

## P M ENGINEERING

UNIT 8, NEW ROAD, ST. IVES,  
CAMBRIDGESHIRE, PE17 4BG



ST. IVES (0480) 61394

VISA

### AMIGA STEREO SOUND DIGITIZER

A high quality two channel sound digitizer that will truly amaze you! Fitted with both line and mic inputs and level controls. Works with currently available parallel port mono or stereo sampling software.\*

Stereo digitizer (state A500/1000/2000) £59.95, plus £2.50 carriage.

\*Aegis Audio Master (mono). Perfect Sound (stereo).

TV MODULATOR SHIFTER for A500 a short extension cable that allows you to move that awkward TV modulator out of the way. Complete with audio cable extender. £9.50, inc p&p.

JOYSTICK/MOUSE PORT EXTENDER for A500. Bring the ports to the front of the Amiga for easy access. Sockets can be mounted to work station. £14.95, inc p&p.

SECOND DRIVE SWITCH, a switched connector that plugs into the drive port. Disables your external drive without un-plugging. Au Amiga models £9.95 inc. p+p.

PRINTER PORT EXTENDER. Connect and use a second device, no need to keep removing your printer. (State A500/2000 or A1000) £12.50, inc p&p.

### CBM 64/128 - TAPE BACK - UP BOARDS - CBM-64/128

The Mk.1 uses a second CBM type cassette deck to copy a program as it loads. Very easy to use. The original Board, beware imitations! £8.95, inc p&p.

NEW IMPROVED Mk.2 has a built in speaker so you can hear your copy being made. Works like the Mk.1 or can be switched to use our 'GENERATOR' software method. £14.00, inc p&p.

ROM SWITCH/RESET BOARD resets all programs that a standard switch can't. Also has a socket for an 8K Eeprom. Full instructions supplied. £8.00 inc p&p.

All products Guaranteed 12 months. Send cheque/P.O. or stamp for more details to: TURBOTRONIC.

46, Ripon Street, Parkinson Lane, HALIFAX, West Yorkshire HX1 3UG.  
Tel. (0422) 52020

**C64 Software**, for sale, widest choice, massive reductions. Send S.A.E to: R Kemp, 4B Currents Lane, Harwich, Essex CO12 3DE. All letters answered fast.

**C128**, 1571 Drive, Music expansion system, 4 slot motherboard, mouse, tape recorder, disk and tape, games. For £420. tel: 0661 843073.

**C64 Programmers** needed. We at Static Software are looking for experienced freelance programmers who have written C64 games. Contact Static Software on (0727) 37148.

**CBM 64** One year old, printer plotter, excellent C.A.D graphics tablet, cassette, recorder, joystick loads software worth over £700. Will sell for £280. Tel: Martin 0342 833061.

**C64, 1541 disk, 1531 datassette**, all boxed, £180 software, books, 40 magazines £290 o.n.o. (021) 308 8637.

**C64**, C2N cassette, 100 games including — California Games, Zigzag, Bubble Bobble, keyboard, magazines, books. Value £850+. Accept £300 o.n.o. Phone Simon — (01) 653-1304.

**Commodore 64**, C2N, 1541, Mps 801, Dolphin Dos, Freeze Machine, Joysticks, extras and £2500.00 worth software, offers around £600.00, genuine sale, tel: 0268-795129 (Essex).

**Force 55** monthly C64 and Sega magazine 80p (inc. p+p). Richard Cairns, 80 Fenham Hall Drive, Fenha. , Newcastle Upon Tyne, NE49XA.

**C64**, datassette, disk drive, joystick, £800+ of original software, tapes/disks — business software, lots of games, blank disks, collection of magazines. £399 o.n.o. Phone (0905) 772654.

**C64 Computer 1541 Disc drive**, cassette deck, joysticks, 80 software titles. Total worth over £1200. Sell for £250. Phone 0222 752345 (evenings).

**Commodore 64**, 2 cassette recorders, back up device, over £450 of original software, magazines, joystick, all for £230 o.n.o. Phone (Dartford) 330457 after 6pm.

**SCA:**  
(Swiss Crackers Assoc)

TALK TO US!!

Phone Commodore  
User now

251-6222

### ADVERTISEMENT INDEX

ARB .....	77	LOAD-IT .....	89
BUDGETSOFT .....	47	LOGIC SALES .....	49
C+VG .....	61	MEGASAVE .....	69
CRL .....	8/9, 48	MEMORY STORE .....	77
CASCADE .....	45, 47, 49, 51	MIRRORSOFT .....	31
CASTLE .....	54	NEBULAE .....	92
CESTRIAN SOFTWARE .....	92	OCEAN .....	36, 64, OBC
CLIK .....	47	ROBTEK .....	51
COMMUNICATIONS+MEDIA .....	93	SDC .....	72
CROWN .....	92	SU .....	77
DATL .....	110-114	SOFTLINK .....	45
DIMENSION .....	16	STORTSOFT .....	67
DOSOF .....	60	STRATEGIC PLUS .....	60
ELECTRONIC ARTS .....	21, 23	TECHNICAL DEVELOPMENTS .....	96
ENGLISH .....	34	TIGER SERVICES .....	92
EVESHAM MICROS .....	49, 78/79	TIMESOF .....	77
FIREBIRD .....	27, 41	TOPSOFT .....	48, 51
GO .....	81	TRILOGIC .....	48
G+COMPUTERS .....	48	US GOLD .....	48
GLINTLAND .....	69	VIDEO VAULT .....	74
GREMLIN .....	IFC/3	VIRGIN .....	74
JADE .....	92	WORLDWIDE .....	83
L&A COMPUTERS .....	67		

TO ADVERTISE IN SELL-OUT CALL ANGIE SMART ON 01-251 6222



## Overlap

● Help! I own a Commodore 128. When programming graphics in 128 mode, and 64 mode, I am unable to stop adjacent colours overlapping. Any ideas to stop this would be most welcome.

Is there any other free memory in the 128 apart from hex \$00FA—00FE?

Hope you can help.  
**Daniel Jones,**  
*Worthing, West Sussex*

There is a problem when using graphics in that the colour map is still geared to the 8x8 matrix of the text screen. This means that when any lines cross, or in any way enter the same 8x8 dot area, they must be the same colour within that grid. Hence you draw one line in blue, then an adjacent line in red and suddenly find that the original line has turned red in places as well. There is a way round the problem, not absolutely perfect, but better than nothing.

By using the 'multi-colour' mode you can get 4 colours per 8x8 area which allows for a background colour plus 3 others, so in theory you could have 3 lines of different colour all passing through the same 8x8 area with no overlapping of colours. However, you can't get 'owl for now' as they say, and the penalty is that the horizontal resolution is halved (ie points in the X-plane are 2 pixels wide). This makes for a much coarser resolution which may not be acceptable so you have to make the choice between the two.

To get into multi-colour mode on the 64, for example, **POKE 53270, PEEK (53270) OR 16**. The four colours are then set using addresses 53281, 53282, 53283 and the normal map, using bit patterns 00, 01, 10, and 11 respectively to select them, using the '2-bit' value in the screen RAM instead of setting just one bit. The free memory for machine code routines on the 128 is much more complex than you might think, because for certain applications you can use RAM below ROM as well. By switching out the BASIC ROM (or even the KERNAL ROM) you can read the RAM at those addresses. In fact you can write to the RAM without having to swop out the ROMs first! Apart from these areas the only other potentially useful one is the cassette buffer at \$0B00—0BC0, another 192 bytes. Be aware though that the disk auto-boot also uses this area.

## Resets

● I have a 64 and would like some information on how to reset the computer.

I have two reset switches one for use in the serial port and the other for use in the cartridge port, but neither will reset the computer.

I have also tried to reset the computer with a paper clip by connecting No 2 and 6 on the serial port but again with no luck.

Could you please help me.  
**A. Baker,**  
*London*

I have come across several cases where the serial reset line appears to have no effect. This seems to be the case with the later machines only so I can only assume that a chance of PCB design has perhaps removed the reset line from the port. I spoke to someone at Commodore about this some time ago and they hinted that there might have been a change, but couldn't say for certain. The reset using lines one and three on the User-port should still work on all machines however, so of all the options, that is the one I would recommend using. One point I would most strongly warn against however, is doing these sort of tests using paper clips, pliers and similar 'Heath Robinson' methods. Nine times out of ten they will work well, but on the tenth time you could just slip or get the wrong holes and short out two other vital lines; this could cause expensive damage to chips. Take the time to make up a connector so that you can check the connections before plugging it into the powered-up machine.

## Bit map

● I have a C128 and want to know how to get into the bit map in 80 col mode, and where to start the data that would fill the screen in the bit map mode, like the 40 col' bit map mode starts at address \$2000.

**Stephen Maskery,**  
*Langton, Staffs.*

The 128's 80-column map is not actually within the addressing range of the computer. What happened is that rather than take up an awfully large amount of space in the existing memory map, Commodore used an additional 16k of RAM for the 80-column screen map which was then accessed through two registers which were in the normal memory map. The result is that while more than adequate for text transfers, it gets rather slow when you try to do direct graphics using the 80-column bit-map because of this 'bottleneck' of the two registers. Fast graphics can be done on the 80-column screen, as several programs have demonstrated, but they use some fancy techniques for speeding up the process to get round the delay. If

# ROMMY'S

you want to experiment, the two registers are at 54784 and 54785.

However, that isn't the whole story because the 8563 display chip itself has 37 registers that control the functions of the chip. I don't have anything like the space to go into detail here, but a very good book for anyone interested in playing with the 8563 is 'Commodore 128 Assembly Language Programming' by Mark Andrews and published by SAMS which has a complete section on the subject.

## Print poser

● Could you please help me on the following points. These are to do with the Commodore 128 with a 1541 disk drive and a 1525 Printer.

When I use the above system in 64 mode running Easy Script/Easy File and other word Processor/database system the system works OK.

However if I use the computer in the 128 mode and the CP/M mode then strange things happen. If I use a word processor or any other CP/M program then the printer goes into its self test routine printing out the complete set of Commodore characters as if the self test/device change switch was in the 'T' position.

If the CP/M mode is running then when I select the CONTROL and P keys which directs the output of the printer instead of the screen then the printer goes into the self test routine again, the only way to get out of this is to switch the printer off and on again and it is then listening again until I try to direct the output to the printer again where upon this thing happens again.

Is there a fault on the printer or computer which may cause this and if so could you please

point me in the right direction to the faulty components? As I am capable of doing most repairs myself.

Or is it that the printer is not compatible with the 128 or CPM modes?

A second point. Is there any way of giving this printer lower case descenders ie I.C. replacements etc. as in the MPS801 series of printers.

The third point is regarding the sound output on the 64 and 128 40-screen display this is accessed by pin 3 on the DIN connector is this the same Pin for 80 column display or is there a Pin output on the 80 column RGBI connector.

**John Walker,**  
*Gateshead.*

One of the problems with the 1525 is that it was designed in the days before the C128 had even been thought of. It sounds very much as though the codes which the 128 mode and CP/M mode are sending it are not what the 1525 is looking for. This is especially true of CP/M which is set up on the 128 to use most of the newer Commodore printers. If the printer works perfectly with all programs and BASIC in 64 mode, then there is unlikely to be anything wrong with either the printer or the computer serial port; it is almost certainly a software problem. It may be possible to alter the CP/M BIOS file to send the correct codes for the 1525, but I don't have one to try and you will need a good CP/M manual to do it yourself.

Your second query on the possibility of getting lower case descenders on the 1525 is also doomed to failure. There is a software program that will turn your files into graphics files and print them in different fonts, but it has to be run separately after you have prepared the document using your normal WP program and is so slow that it really isn't worth the effort. The MPS801 ROM will not work with the 1525, so no hope there I'm afraid. I really think that unless cost is a major problem that you consider investing in a new printer — you really can't do justice to the 128 on



Copyright Walt Disney.



▲ *Hmm, these cheap memory expansion kits are a con ...*

a 1525 these days, especially when there are so many inexpensive NLQ dot-matrix printers on the market.

## TV display

● I recently bought a Commodore 128, and I have a question regarding the use of the 80-column display. According to the user's guide, to use the 80-column display you need either an RGBI monitor or a 1901 monitor set to a certain position.

I have a colour TV and I cannot afford to buy a monitor yet, so I would like to know whether there is any way of using an 80-column display on my colour TV.

I would greatly appreciate if you could help me with this problem.

*Christakis Ionnou, London.*

One of the problems with trying to use 80 column on a TV is that the resolution is often just not good enough. Some B&W TVs can produce an acceptable picture, but using a colour TV to display 80 columns can cause colour distortion effects which make the text virtually unreadable. There are certainly lots of interfaces around for converting the RGBI signal into RGB or composite video to allow a much wider range of monitors to be used, but I imagine that few companies would sell an interface for a TV when the end result is so uncertain. If any reader knows of such an interface then please get in touch, otherwise I am afraid you are limited to 40 columns until you can build up the readies!

## Bad sprite

● In your issue you told us how to use a joystick. I typed it in with my own data but all I

got was a bad sprite. Also I had to delete line 20. Then I checked my data and it was right. PLEASE TELL ME HOW DID THIS HAPPEN? Also please answer my questions:

1. How do you move a sprite?
2. How do you make sprites move and fire at each other?
3. How do you position sprites on the screen?

Please try and answer my questions. It would help a lot if you could  
*Nial O'Farrel and Kevin Kavanagh, Cork, Eire*

Having checked back on the June issue I discover that gremlins made an appearance again! There is a misprint on line 20; it should read **FOR S=0 TO 62:POKE832+S,255:NEXT S** As for moving a sprite, all you have to do is to alter the X and Y co-ordinate registers for the sprite you want to move. Page 157 (Appendix O) of the 64 manual (unless you have a different version of course!) contains the 'map' of the sprite registers.

The sprite registers all start at address 53248 and the values given are added on to this start address; thus the X register for Sprite 0 is at 0 and the Y register is at 1 (actual addresses 53248 and 53249 respectively). Get the idea? By changing the values of these two locations you change the position of the sprite on the screen. For example, by adding 1 to each value inside a loop, the sprite will travel diagonally across the screen from left to right. The example program in the June issue does show how this works.

As for firing at each other, you can use either UDGs as the 'bullets' or other sprites; the restriction on the latter being that you are using up a limited number. What you have to do is maintain a record of the position of each bullet (using a variable) so that you know where it is on the screen, plus storing information on its direction and speed; not forgetting of course to check if it has hit anything. You then move the bullets in very much the same way as moving the sprites but probably at a faster speed — not very good using BASIC however, as it's normally much too slow to do all this. Positioning of sprites on the screen is the same as moving them. You work out where on the screen you want to put them, bearing in mind the values range from 0-319 in the horizontal (X) direction and 0-255 in the vertical (Y) direction (some of which will be off the visible area of the screen). You then POKE these values into the relevant X and Y registers, except that if the X value is going to be greater than 255 you must POKE the register with (X value — 255) and set the relevant 'bit' in register 16 (bit 1 for sprite 0 and so on).

Your best bet is to get hold of a book like Rae West's 'Programming the CBM 64' which can go into much more detail of how to do all these things than I could hope to cram into these two pages.

ROMMY'S  
KIDS



# YOU TOO COULD LIKE LOOK THIS!!!



Please send me \_\_\_\_ T-shirts at £4.95 (+40p p&p) each.

Size M/XL. Total amount enclosed £ \_\_\_\_

Please make cheques payable to Commodore User and send to

Commodore User T-shirt offer, 14 Holkham Road, Orton Southgate, Peterborough, PE2 0UF.

Name .....

Address .....

.....

.....  
Please allow 28 days for delivery.

Guaranteed to create both shock, horror and jealousy among all your mates, this exclusively designed T-shirt is a **MUST** for all serious CU readers.

To get one before **THEY** get you just fill in the coupon and send it along with a cheque for £4.95 + 40p p&p.



# ARKANOID



**the name  
of the game**

Licensed from © Taito Corp., 1986

**£7.95**  
**SPECTRUM**

"DOH" has come back to life, and occupying the huge space-craft ZARG, has entered our Universe.

ARKANOID type space-fighter MIXTEC runs through long forgotten computer data until it finds the answer to this threat... "VAUS 2" is launched and speeds towards the threatening alien presence, before it can extract its revenge... "The Revenge of Doh"

Adding to the fun and excitement of Arkanoid... All new Features include exit choices to vastly increase the screen options, many extra "VAUS" effects, multiple shots and a secret additional alien to contend with. This adds up to the most thrilling reaction game since ARKANOID but with so many improvements you just won't be able to stop playing...

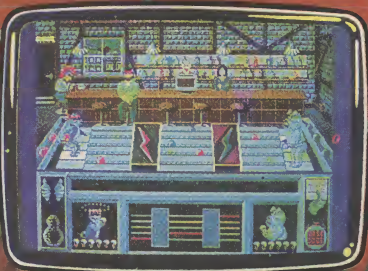
**COMMODORE**  
**£8.95**  
**AMSTRAD**



# BAD CAT



*"The graphics used are of a high standard, the events original and the sound is superb."* ST USER



Screen shots from Amiga version.

It's the year 1984 and Los Angeles prepares for the Olympic Summer Games. The dignitaries and celebrities prepare their speeches, and await the huge crowds expected to attend. Beware there are still the straying city-dweller cats - despised by all. The infamous cats are well known for they are planning their own competitive games. Will Bad Cat live up to his name?

PC - 24.99d  
 CBM 64/128 - 9.99t, 11.99d. AMIGA - 24.99d  
 AMSTRAD - 9.99t, 14.99d. ATARI ST - 19.99d



GO! Media Holdings Ltd., Units 2/3, Halford Way, Halford, Birmingham B6 7AX TEL 021 356 3388

